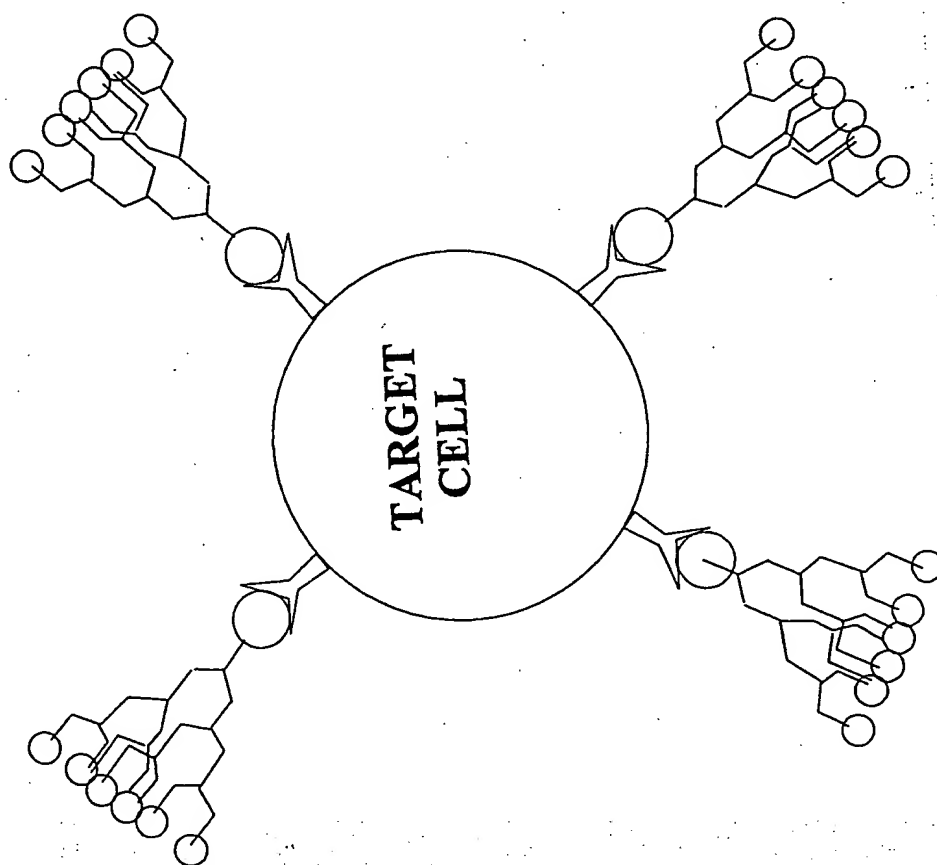
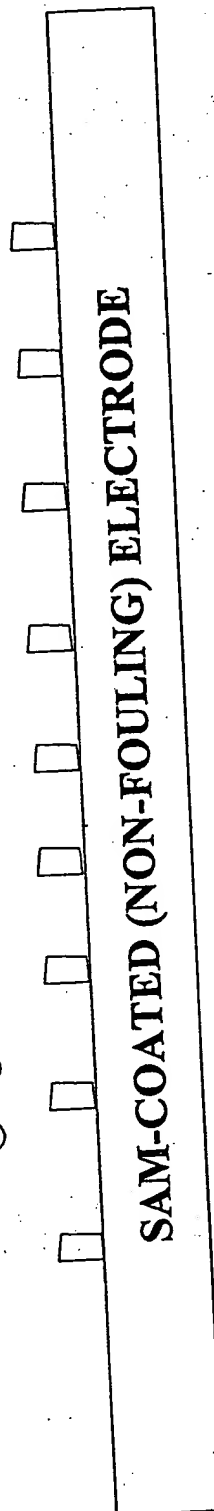
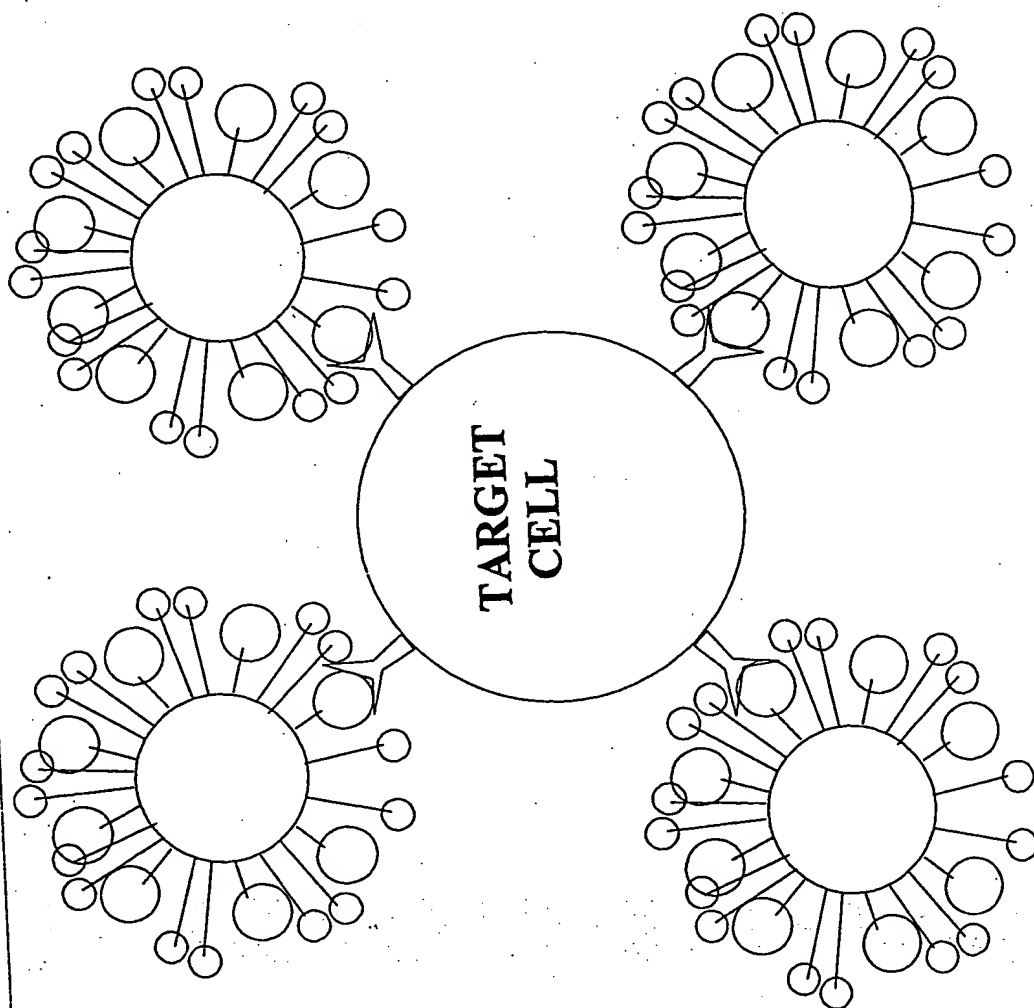


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SAM-COATED (NON-FOULING) ELECTRODE



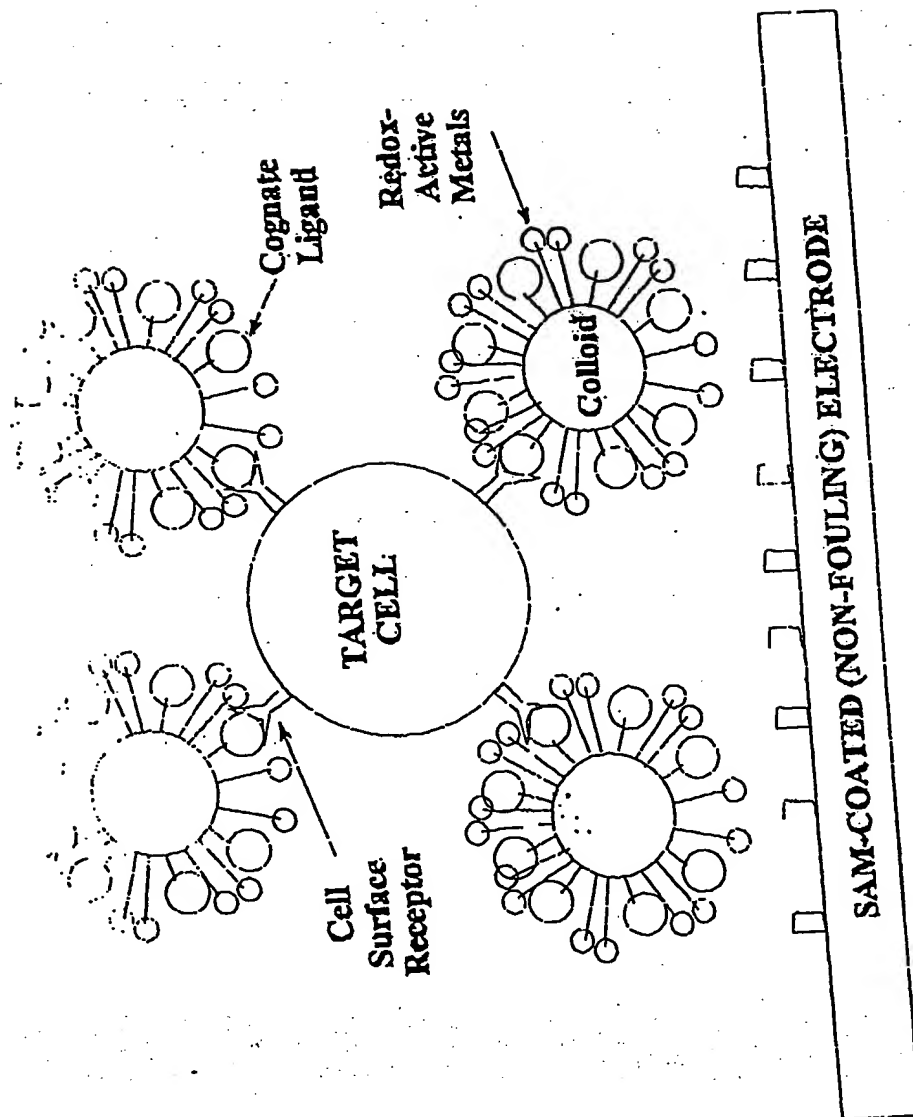


Figure 3

ref -

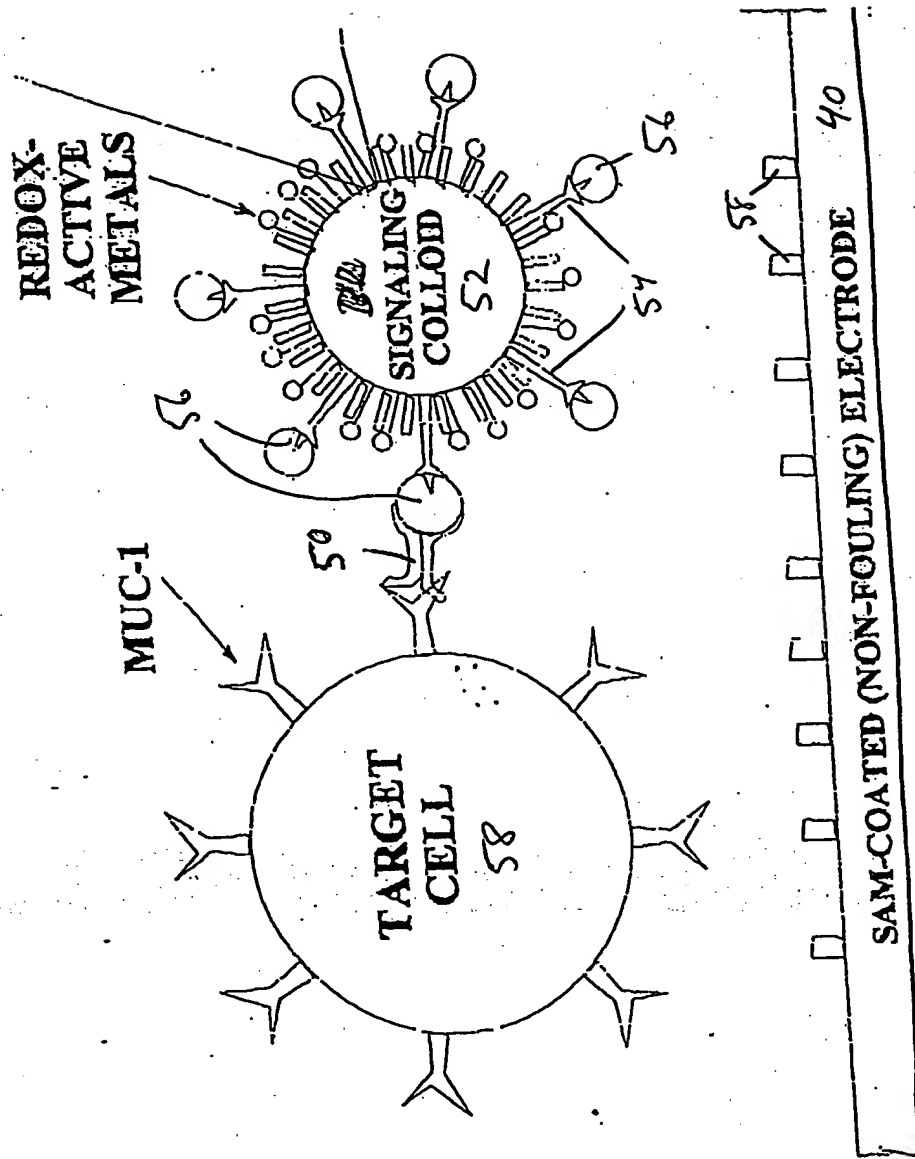


Figure 4

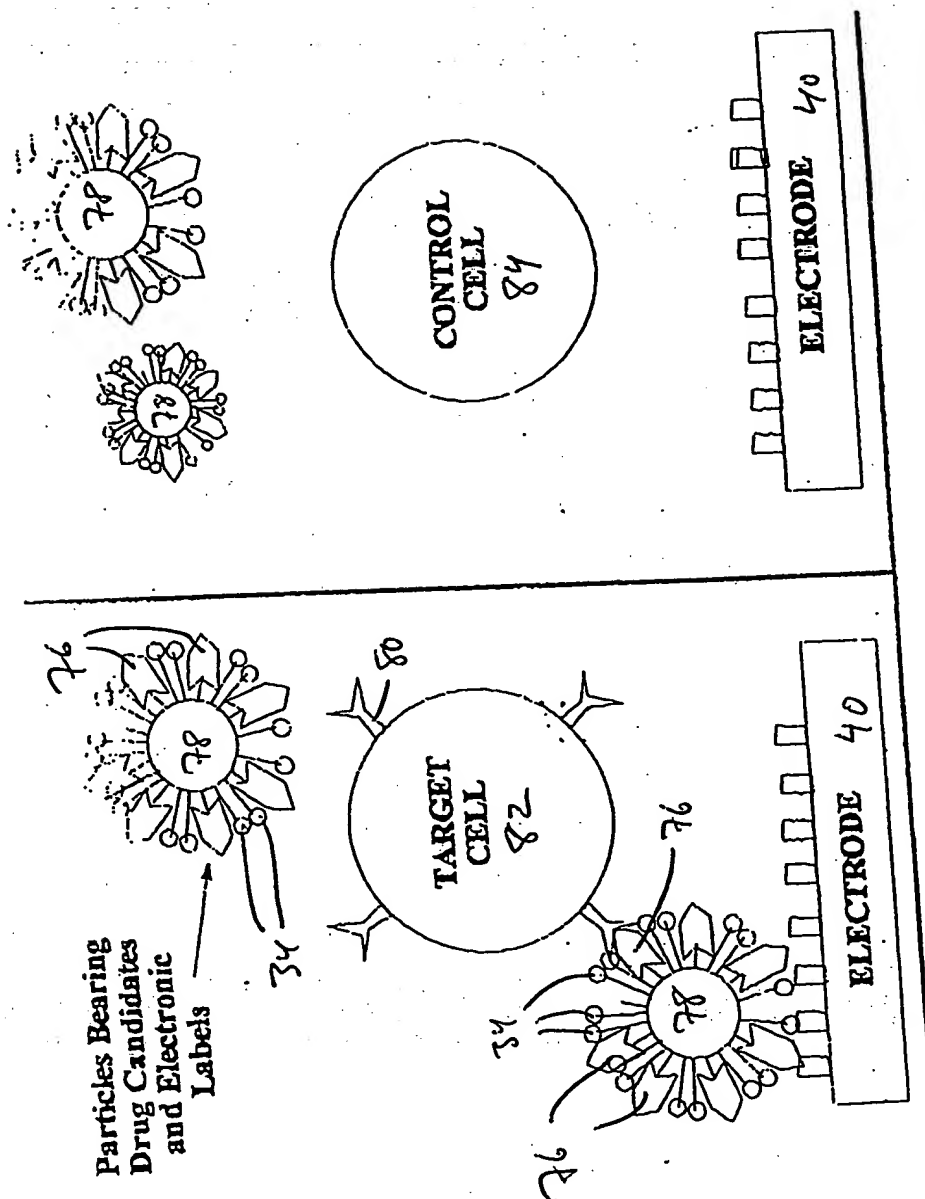


Figure 7

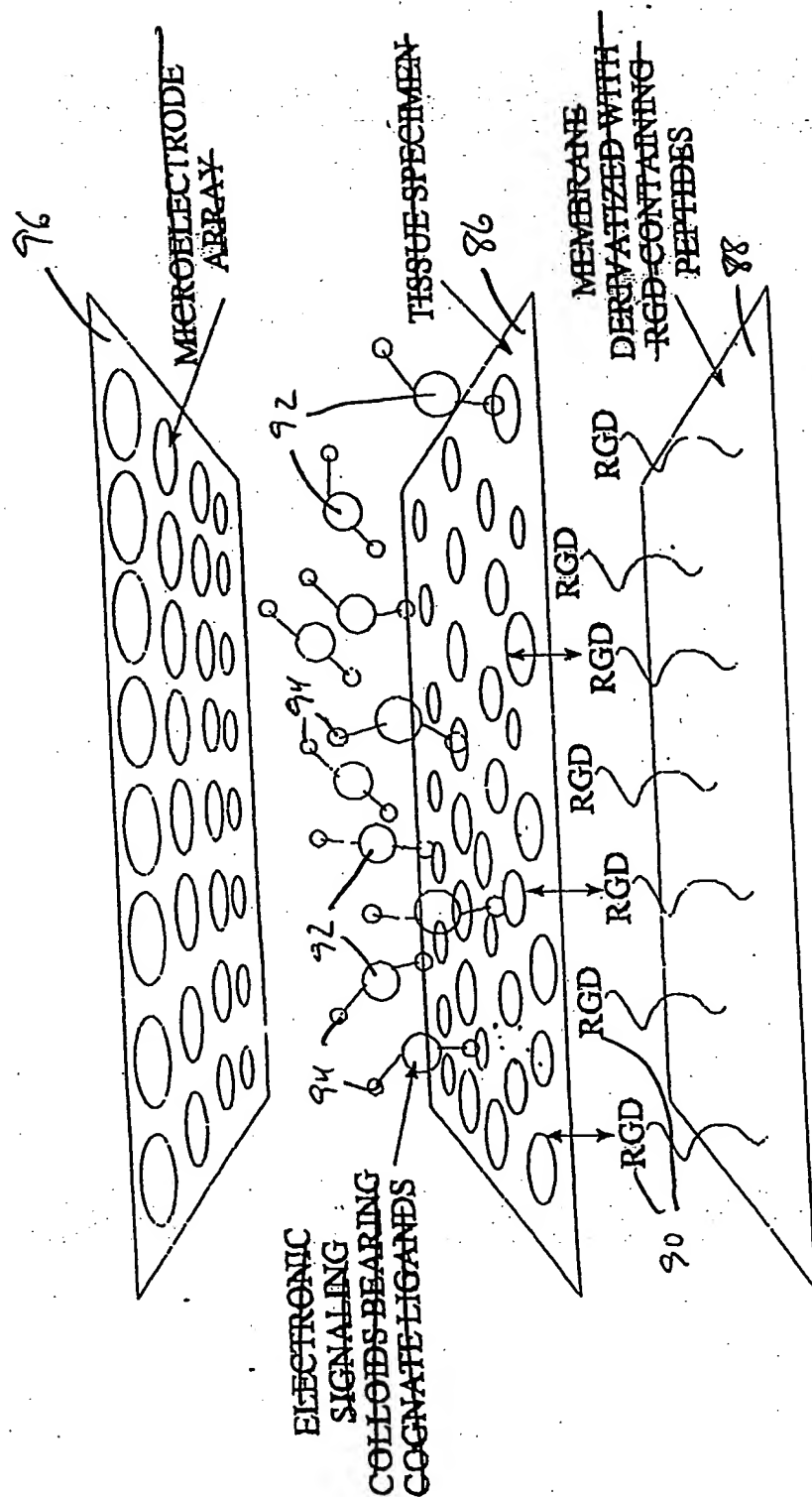


Figure 8

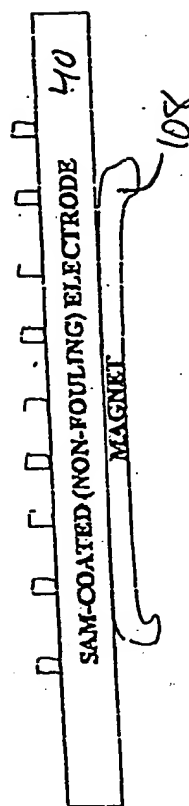
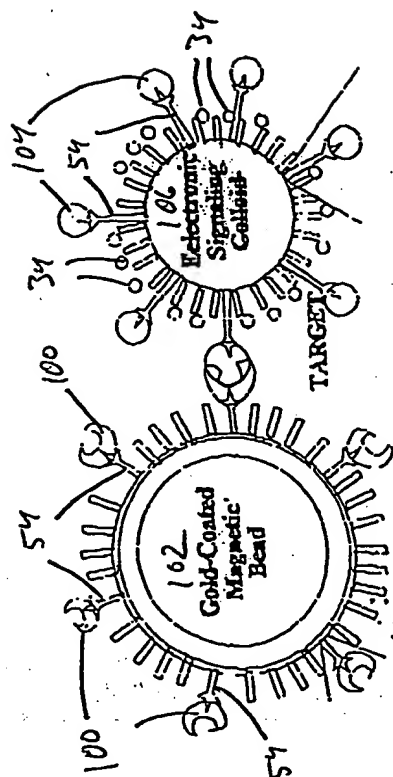


Figure 9

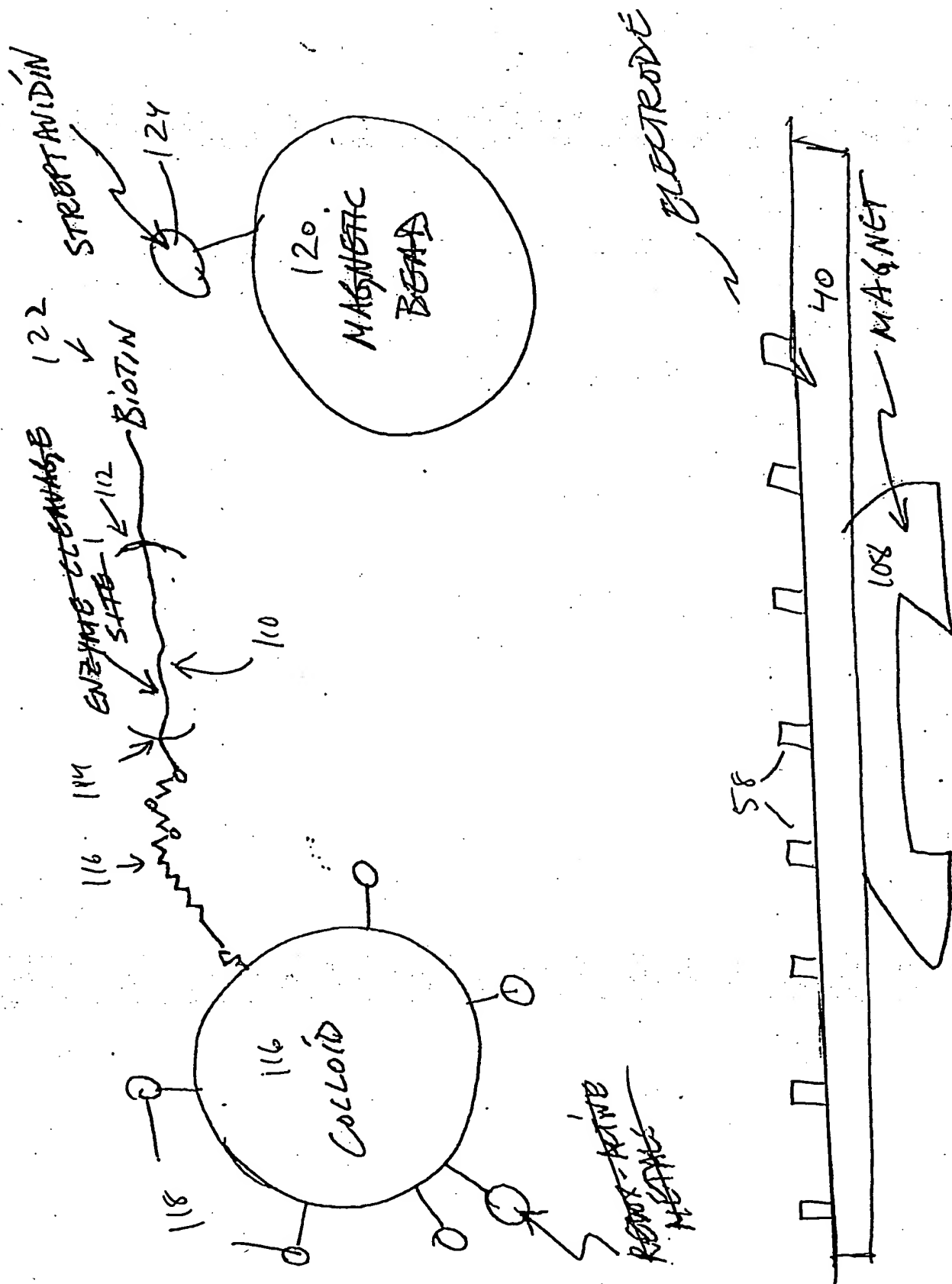
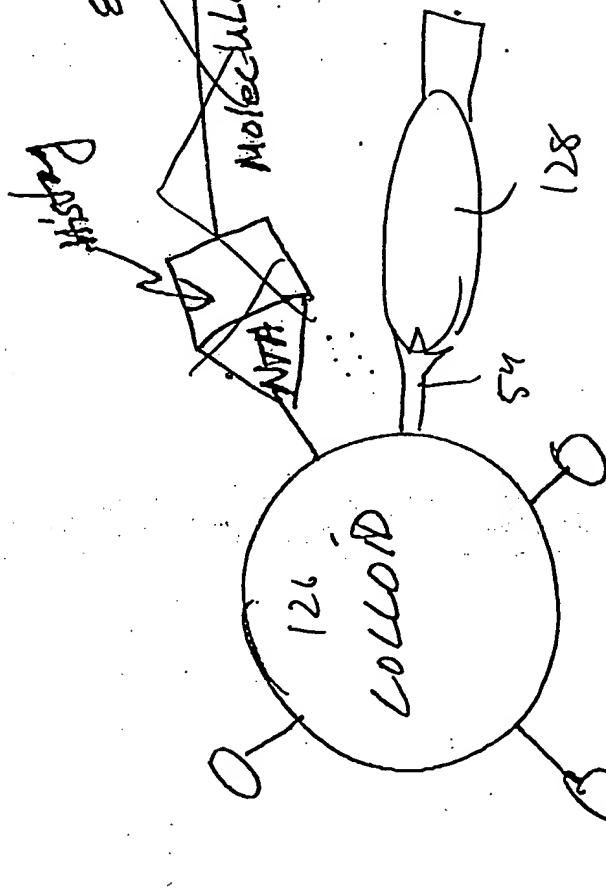
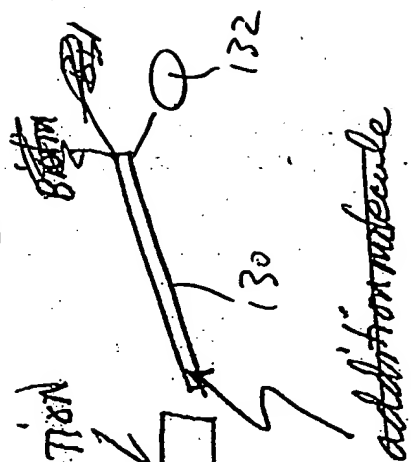
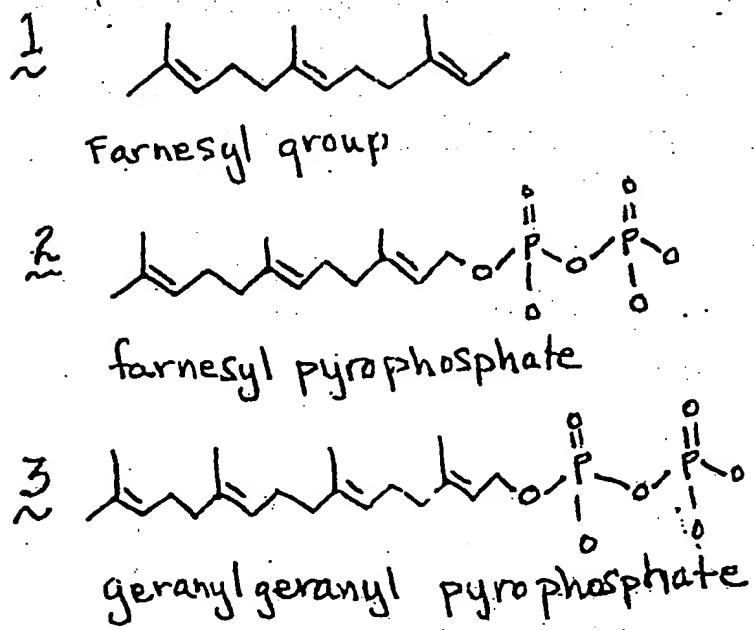


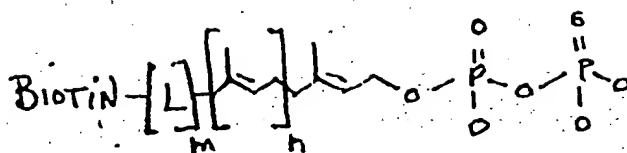
Figure 10

134 — (Magnetic Bead 120) — STREET AUDITING



**Figure 12**

a)

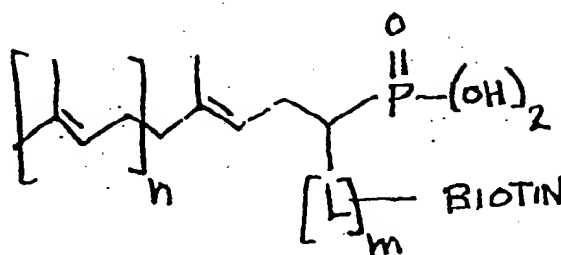


$$n=0-10$$

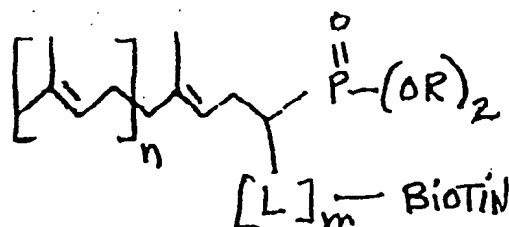
L = Linker

$$m=0-10$$

b)



c)



d)

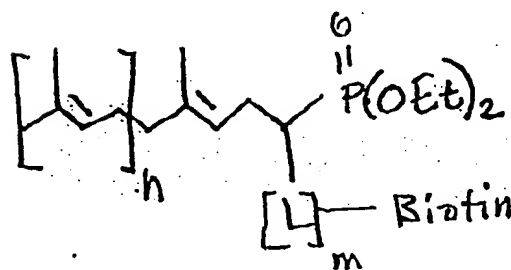
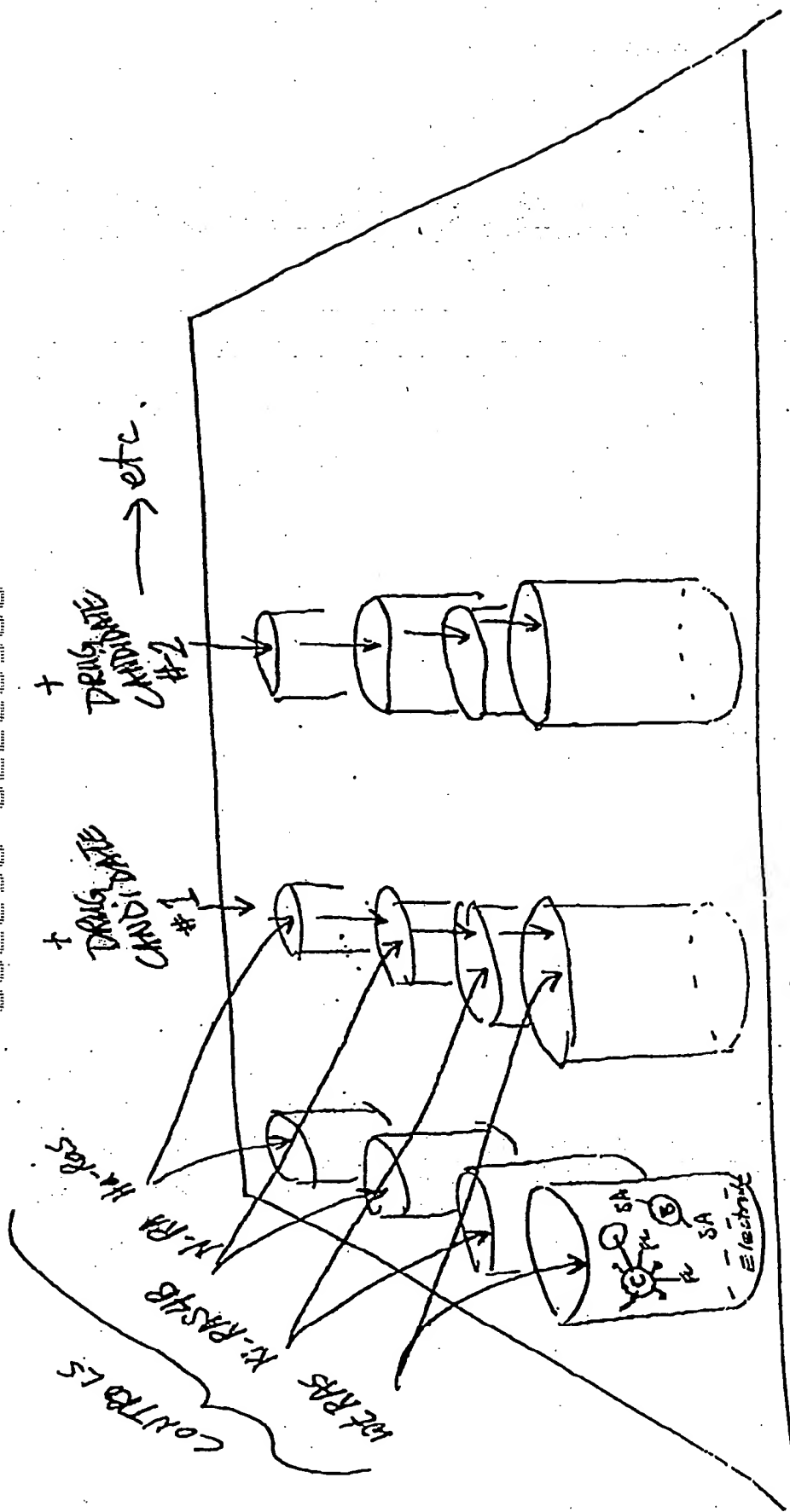


Figure 13

FARNESYL PROTEIN
TRANSFERASE



Figure 14

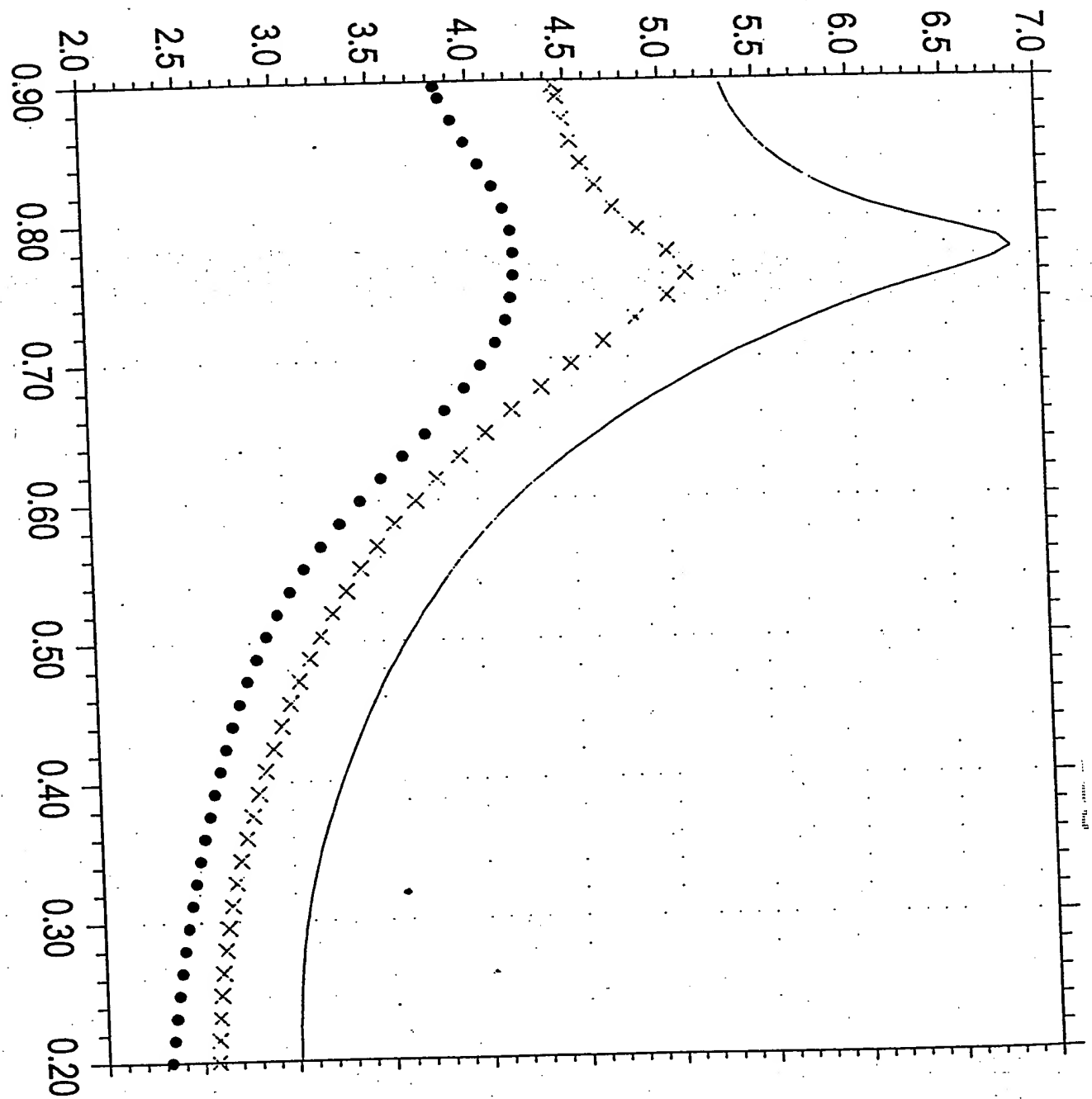


micro electrode array with capability to
electromagnetically attract magnetic beads

Figure 15

Init E (V) = 0
Final E (V) = 0.9
Incr E (V) = 0.008
Amplitude (V) = 0.025
Frequency (Hz) = 10
Sample Period (s) = 1
Quiet Time (s) = 2
Sensitivity (A/V) = 2e-6

- cb038_011.bin
- × cb038_012.bin
- cb038_013.bin



AC Current / 1e-6A

Potential / V

Fig. 16

09602778.052300

Fig. 16

Sept. 28, 1999 22.22.11

Tech: ACV

File: cb038_014.bin

Init E (V) = 0

Final E (V) = 0.9

Incr E (V) = 0.008

Amplitude (V) = 0.025

Frequency (Hz) = 10

Sample Period (s) = 1

Quiet Time (s) = 2

Sensitivity (A/V) = 2e-6

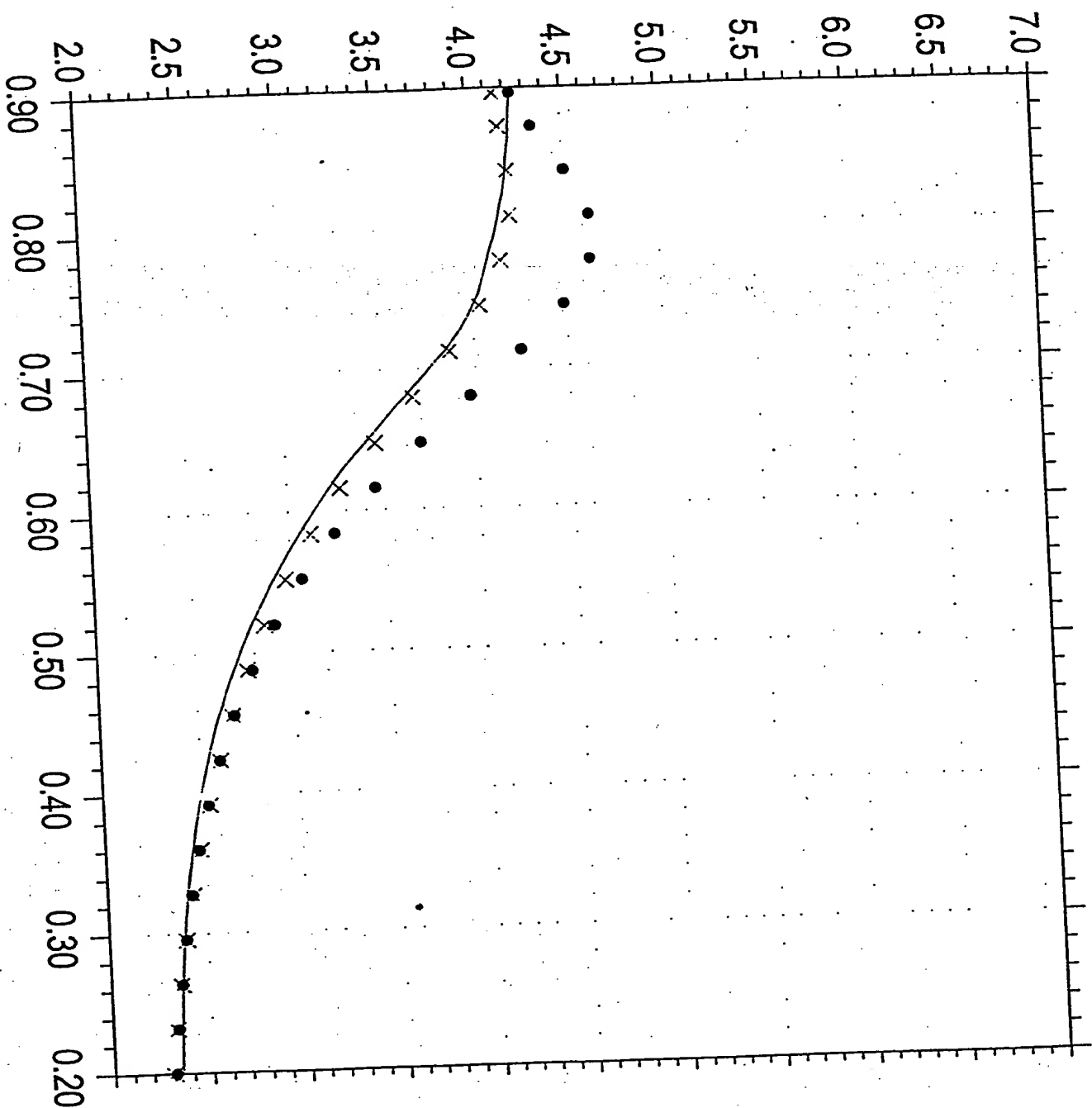
● cb038_014.bin

× cb038_015.bin

— cb038_016.bin

—

AC Current / 1e-6A



Potential / V

Fig 17

0360277B.062300

Fig 17

INVECO 01.10.1999

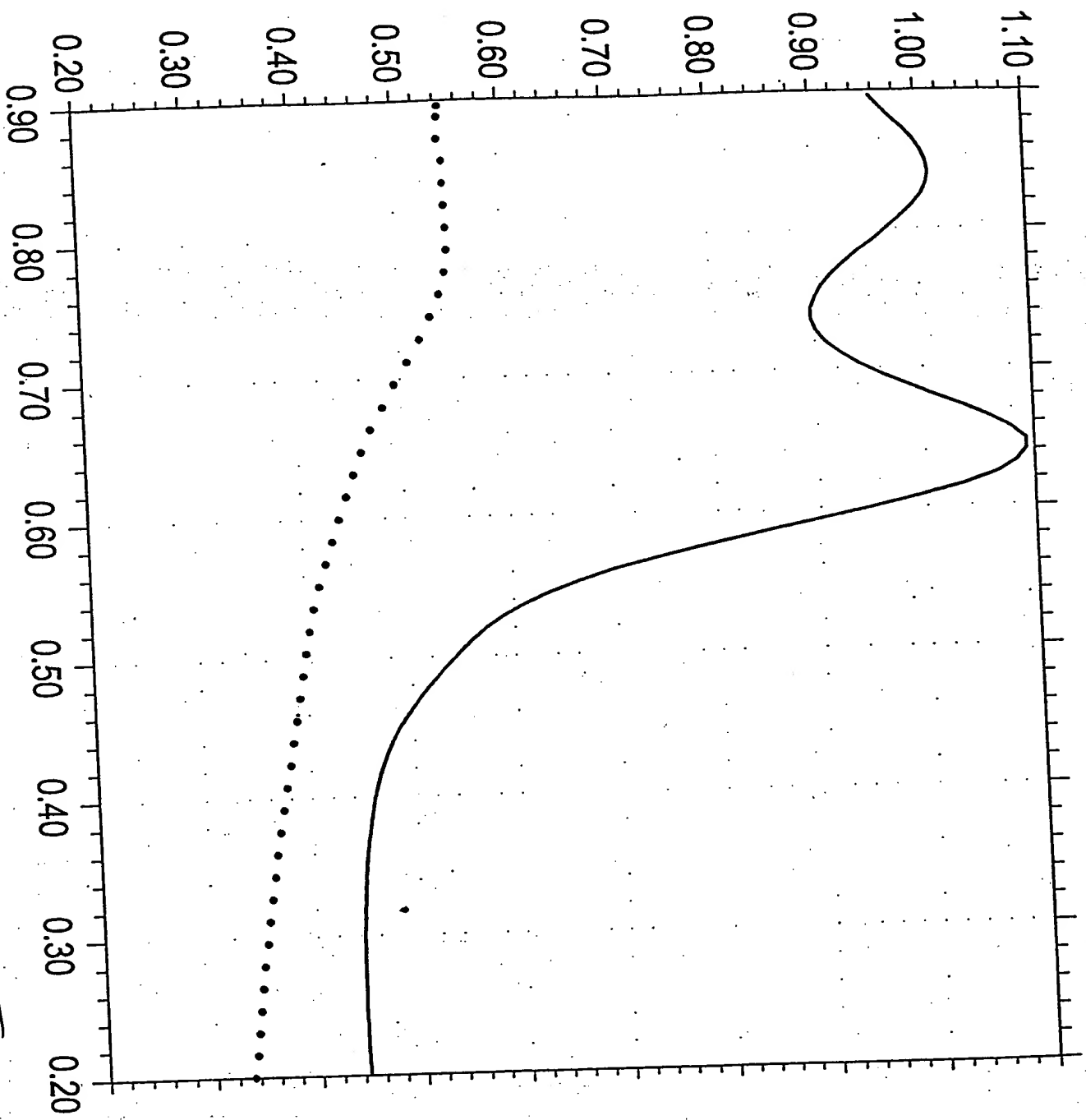
Oct. 5, 1999 16:34:32

Tech: ACV

File: cb042_002.bin

Init E (V) = 0
Final E (V) = 0.9
Incr E (V) = 0.008
Amplitude (V) = 0.025
Frequency (Hz) = 10
Sample Period (s) = 1
Quiet Time (s) = 2
Sensitivity (A/V) = 5e-5

— cb042_002.bin
● cb042_005.bin



AC Current / 1e-5A

Potential / V

09502778.062300

Fig. 18

Fig. 18

HUVECs on electrodes coated with 20% #1 T/- NWL perfluor

Oct. 6, 1999 14:26:57

Tech: ACV

File: cb042ba15

Init E (V) = 0

Final E (V) = 0.9

Incr E (V) = 0.008

Amplitude (V) = 0.025

Frequency (Hz) = 10

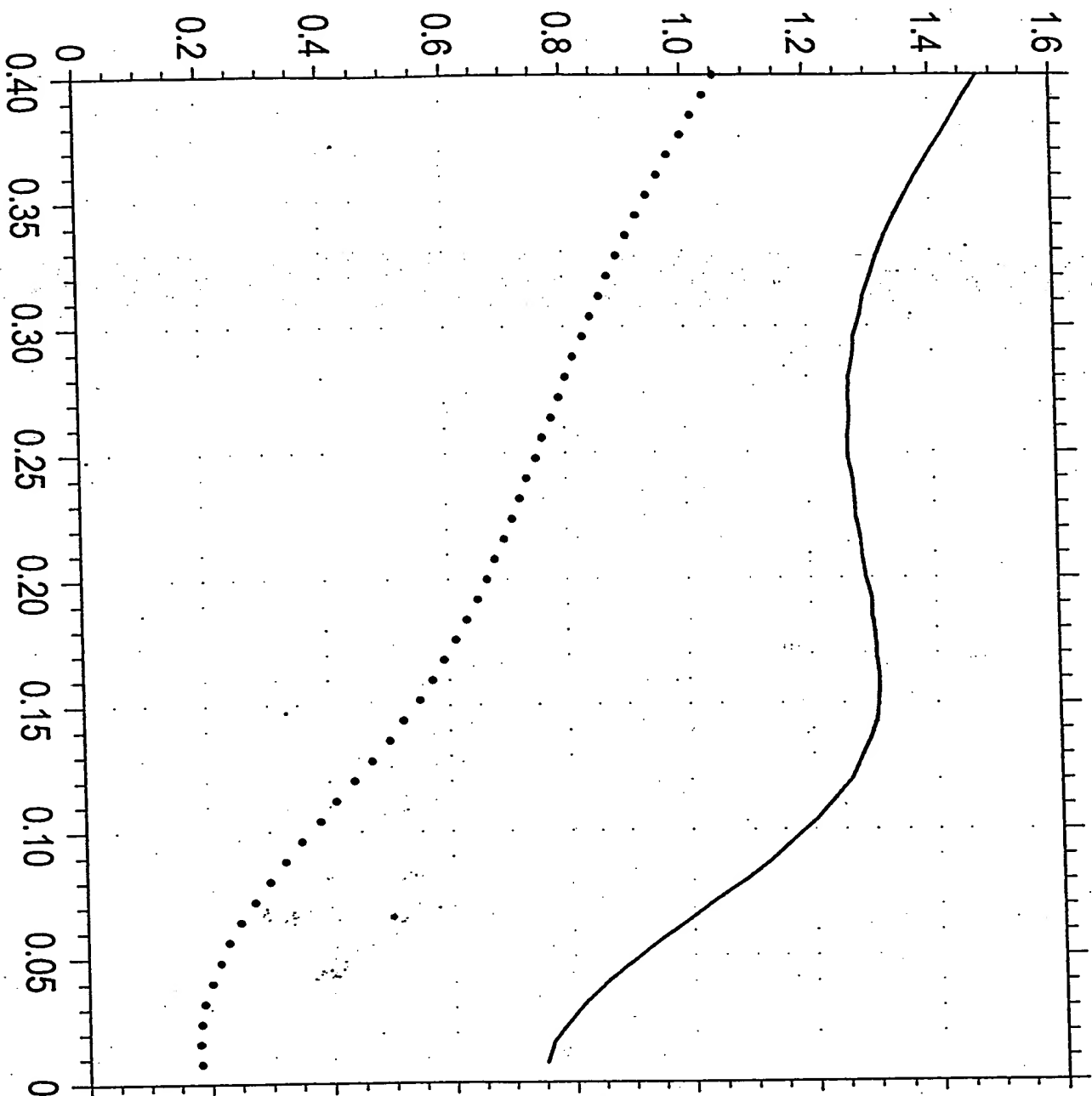
Sample Period (s) = 1

Quiet Time (s) = 2

Sensitivity (A/V) = 5e-5

— cb042ba15

● cb042b16.bin



Potential/V

0.40 0.35 0.30 0.25 0.20 0.15 0.10 0.05 0

Fig. 19

Fig. 3

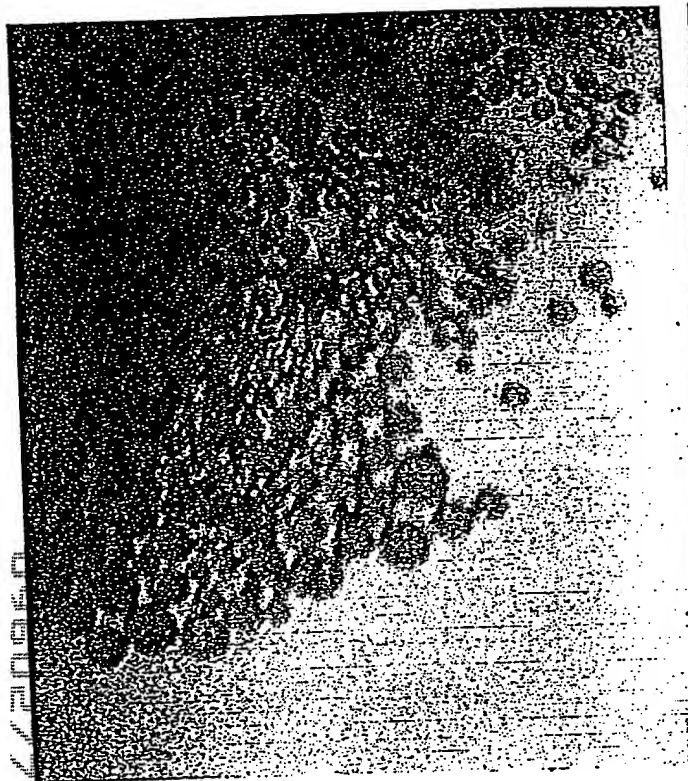


Fig 20

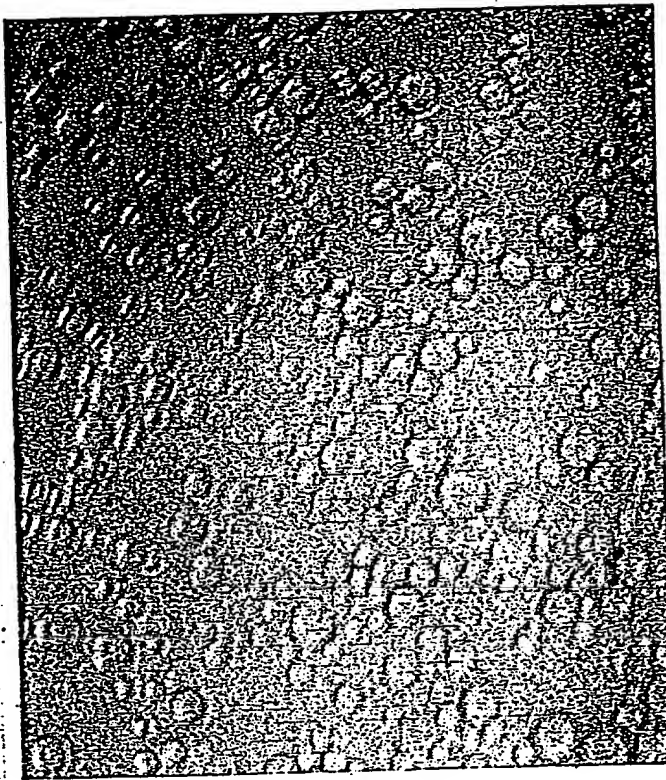


Fig 21

000290" 8 20067 8-062300

0	0	0
25	34	8
50	12	57
65	107	98
80	220	194

Fig 4

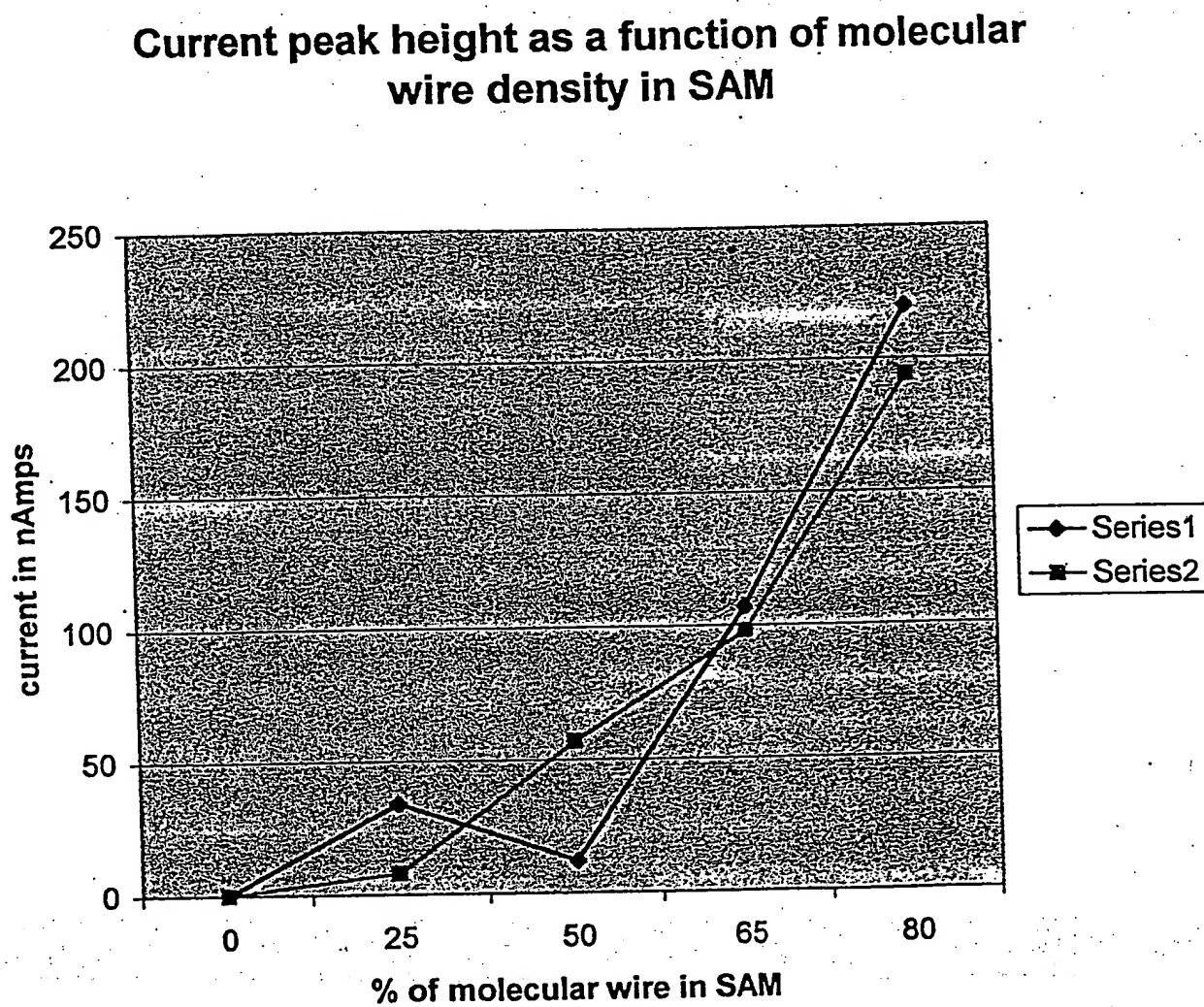


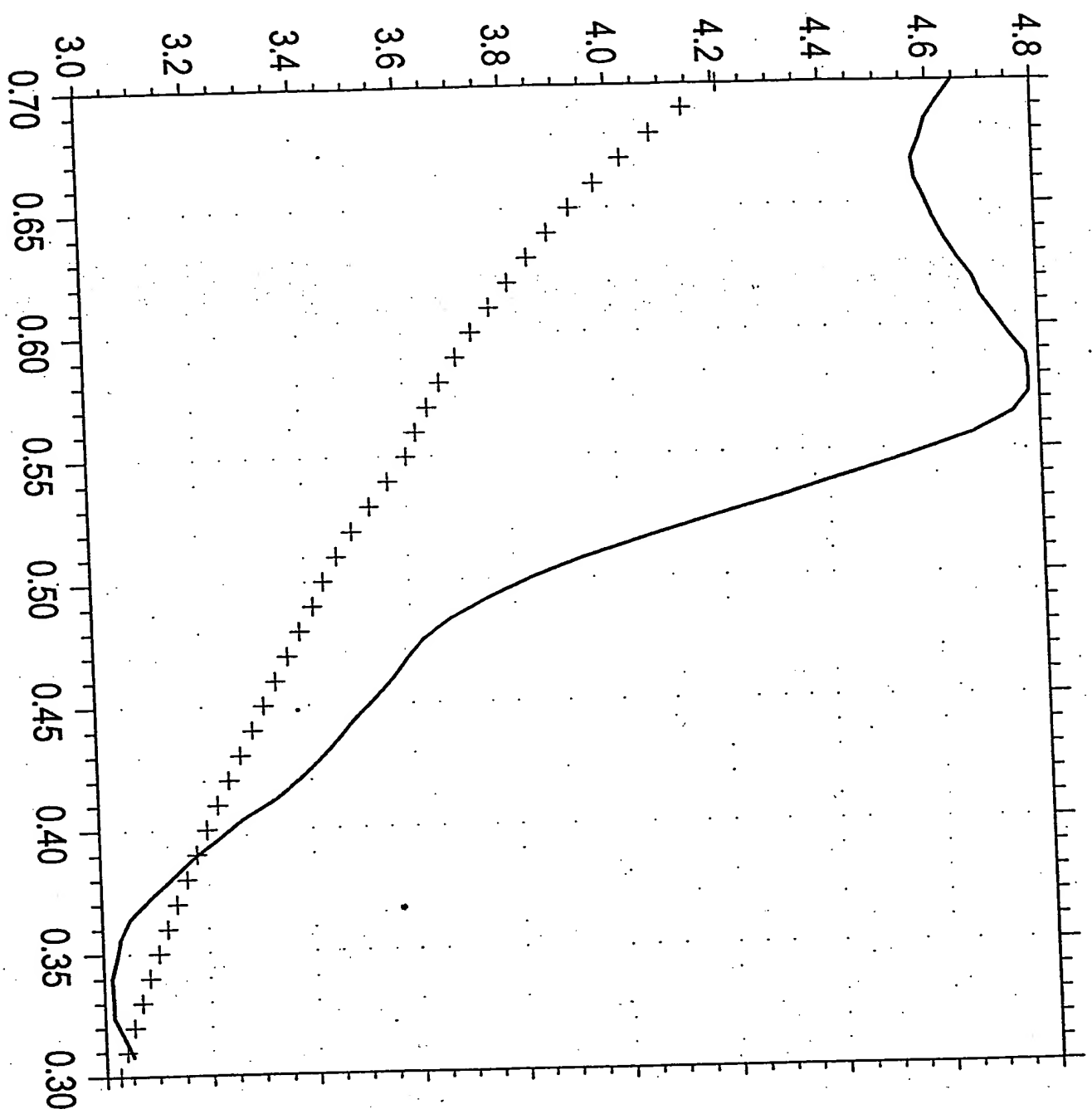
Fig. 22

Sept. 30, 1999 17:16:37

Tech: ACV

File: cb040_019.bin

Init E (V) = 0.3
Final E (V) = 0.7
Incr E (V) = 0.008
Amplitude (V) = 0.025
Frequency (Hz) = 10
Sample Period (s) = 1
Quiet Time (s) = 2
Sensitivity (A/V) = $1e-4$
— cb040_019.bin
+ cb040_001.bin



AC Current / $1e-6A$

Potential / V

09602778 . 052300

File 23

11/5/99

Sept. 30, 1999 16:03:15

Tech: ACV

File: cb040_006.bin

Init E (V) = 0.3

Final E (V) = 0.7

Incr E (V) = 0.008

Amplitude (V) = 0.025

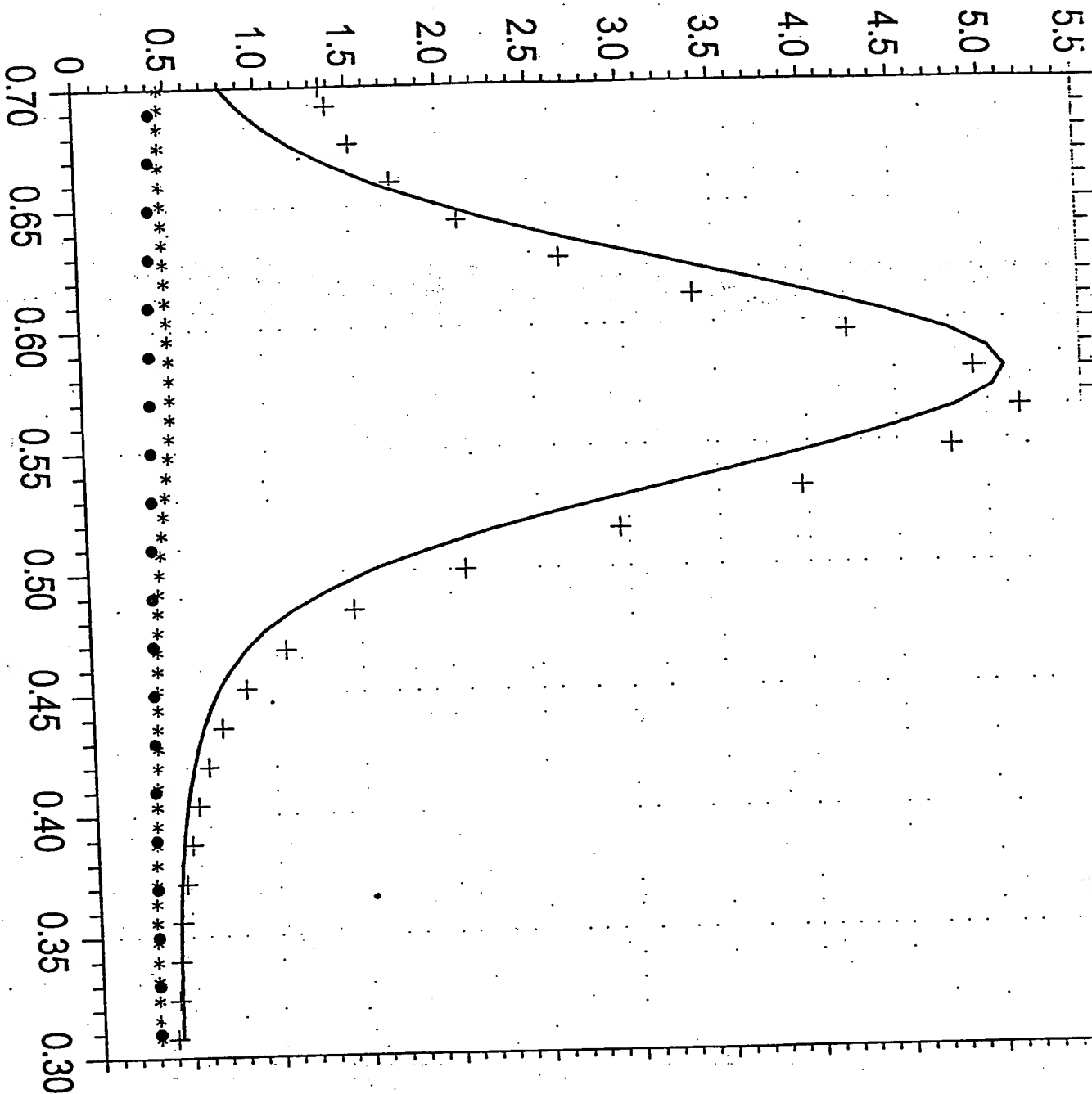
Frequency (Hz) = 10

Sample Period (s) = 1

Quiet Time (s) = 2

Sensitivity (A/V) = 1e-4

- cb040_006.bin
- + cb040_011.bin
- * cb040_019.bin
- cb040_001.bin



Potential / V

Fig. 24

096027B.DEEED

Fig 6a

Jan. 11, 2000 12:38:39

Tech: ACV

File: sb062_007bb

Init E (V) = 0.1

Final E (V) = 0.7

Incr E (V) = 0.008

Amplitude (V) = 0.025

Frequency (Hz) = 10

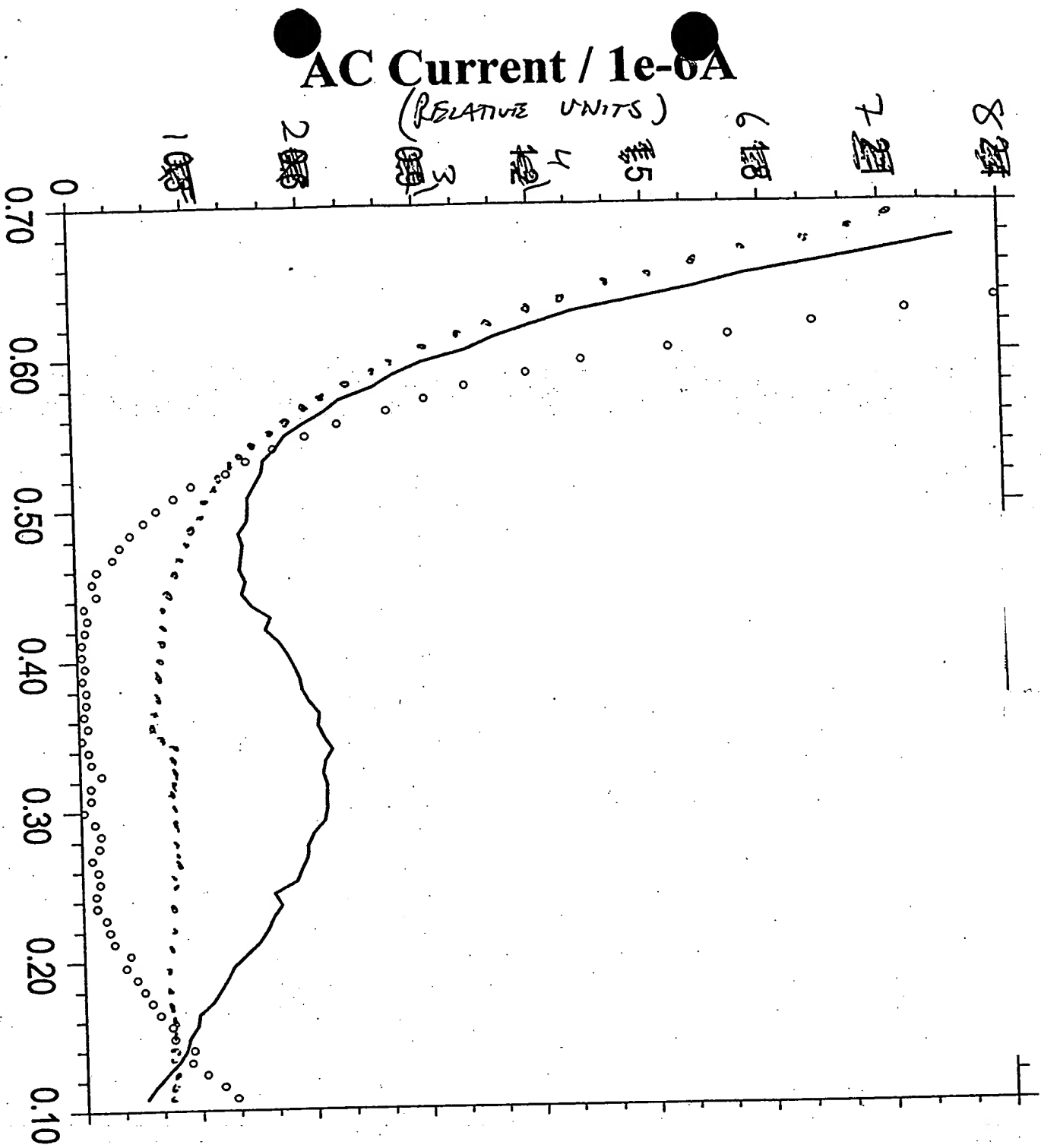
Sample Period (s) = 1

Quiet Time (s) = 2

Sensitivity (A/V) = 5e-4

— sb062_007bb

○ sb062_012bb.bin



Potential / V

0960277B.D5E3DD

Fig. 25

Nov. 24, 1999 11:23:34

Tech: ACV

File: negconbb.bin

Init E (V) = 0

Final E (V) = 0.8

Incr E (V) = 0.008

Amplitude (V) = 0.025

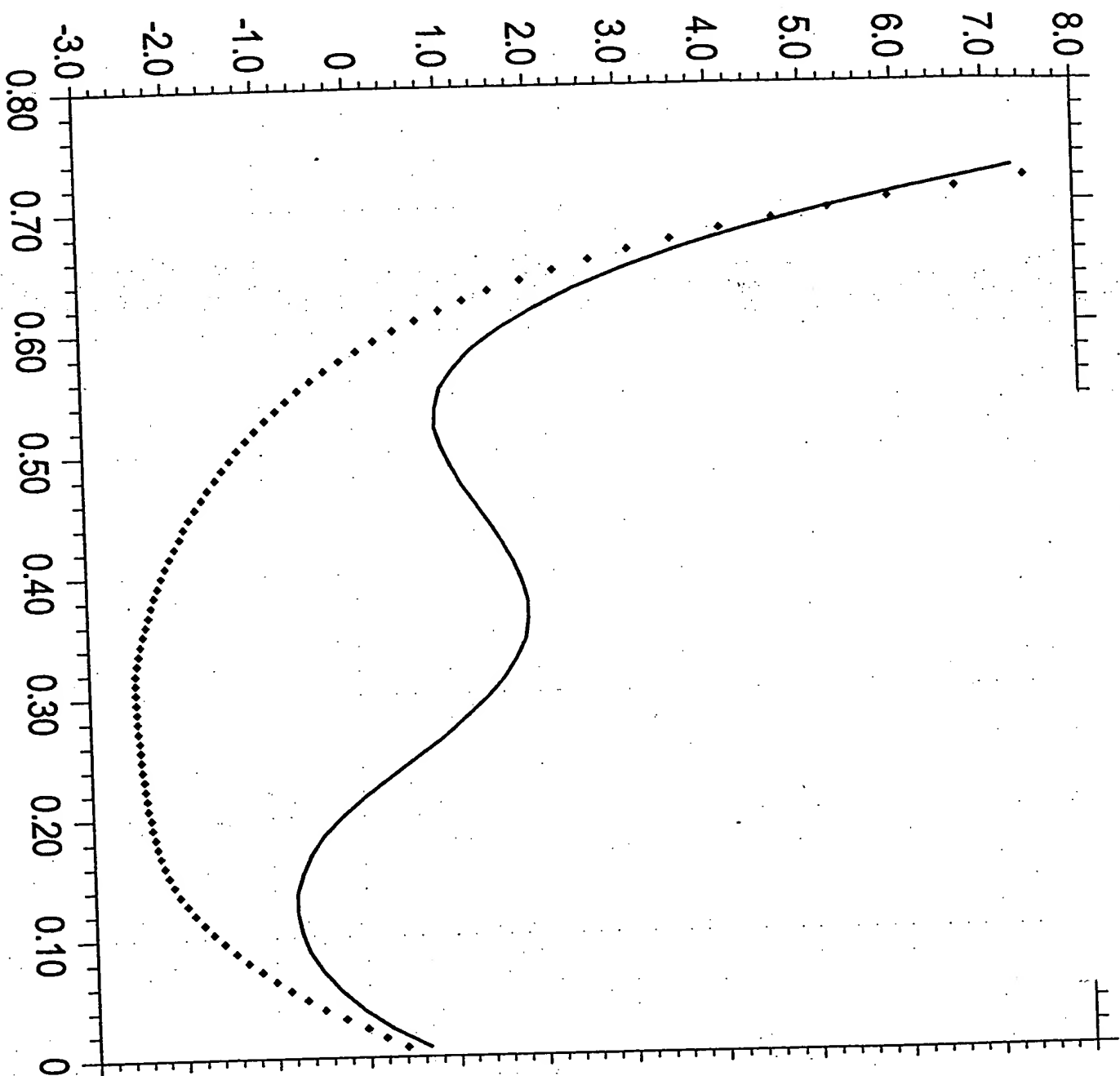
Frequency (Hz) = 10

Sample Period (s) = 1

Quiet Time (s) = 2

Sensitivity (A/V) = 1e-5

◆ negconbb.bin
— posconb.bin

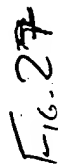


AC Current / 1e-7 A

Potential / V

0950278.052300

Fig. 26



Sept. 2, 1999 20:20:54

Tech: ACV

File: cb027_009.bin

Init E (V) = 0.18

Final E (V) = 0.58

Incr E (V) = 0.008

Amplitude (V) = 0.025

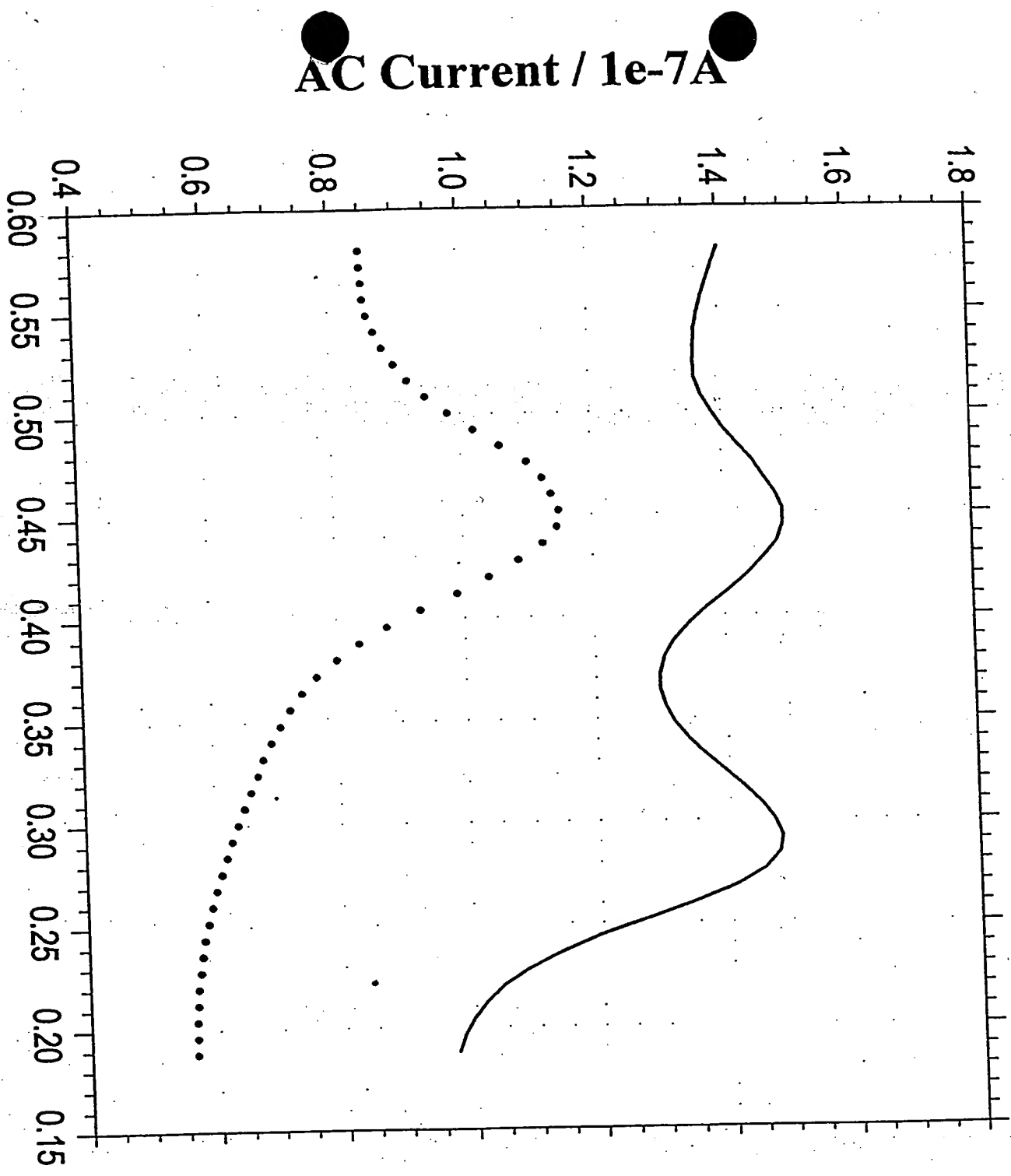
Frequency (Hz) = 10

Sample Period (s) = 1

Quiet Time (s) = 2

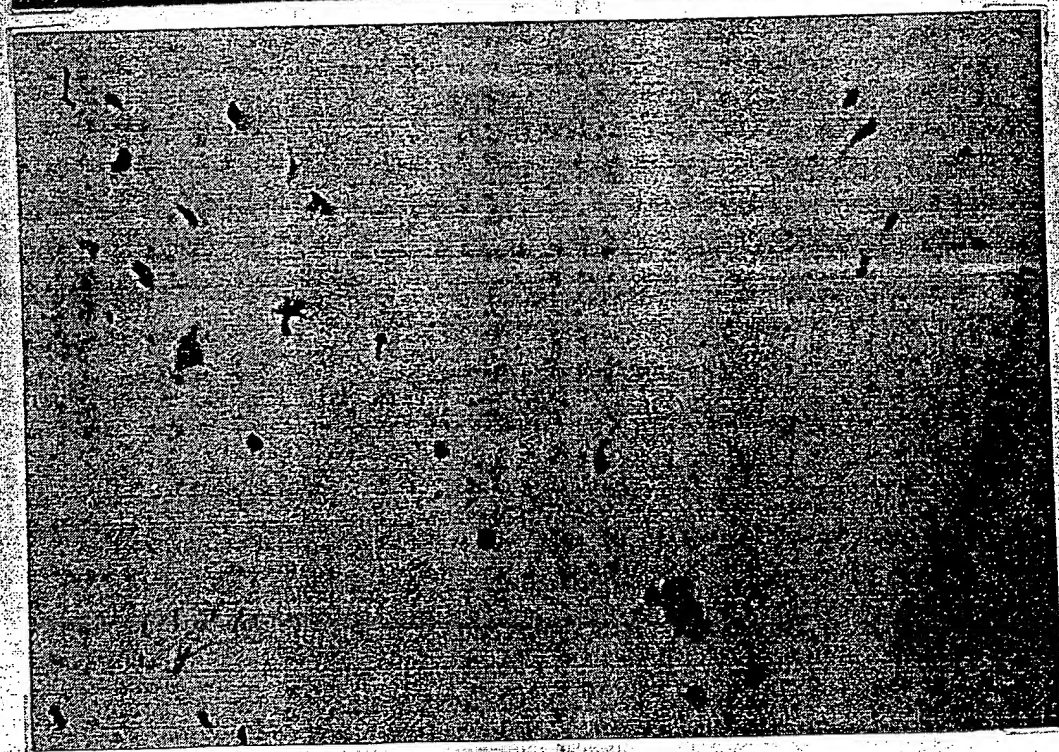
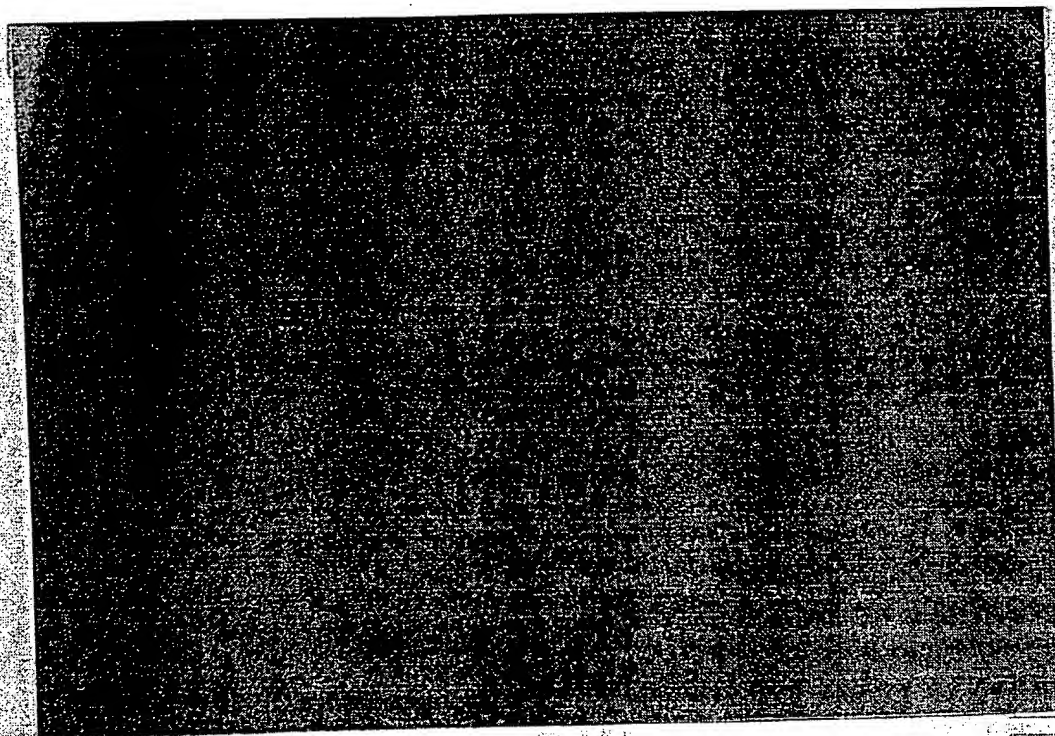
Sensitivity (A/V) = 2e-6

● cb027_009.bin
— cb027_013.bin



AC Current / 1e-7A

Potential/V
Fig. 28



16.29A

0960273 8/20960

16.29B

006290" 8/20960

Fig 30A

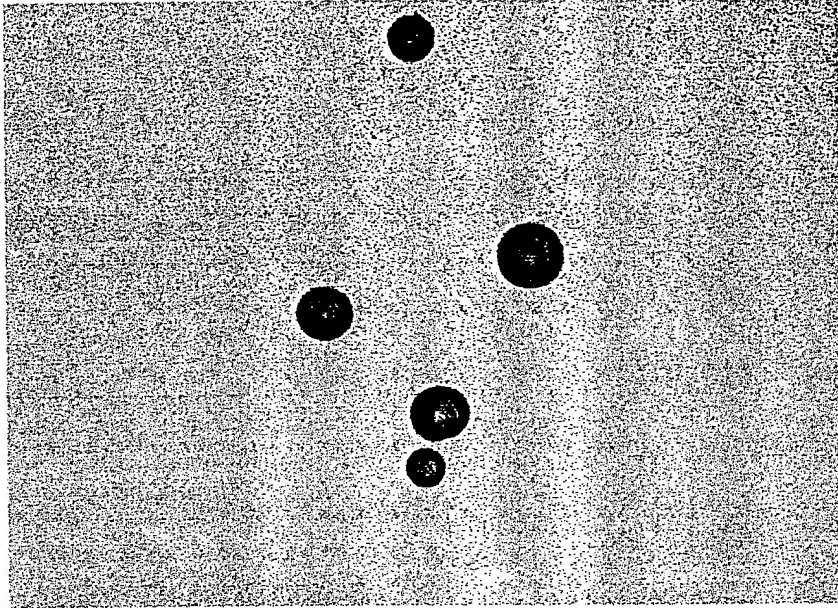
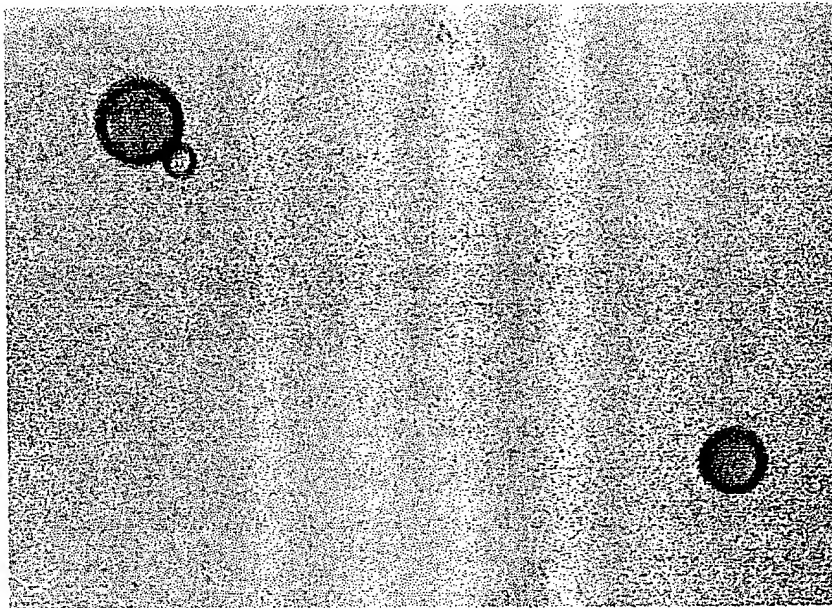
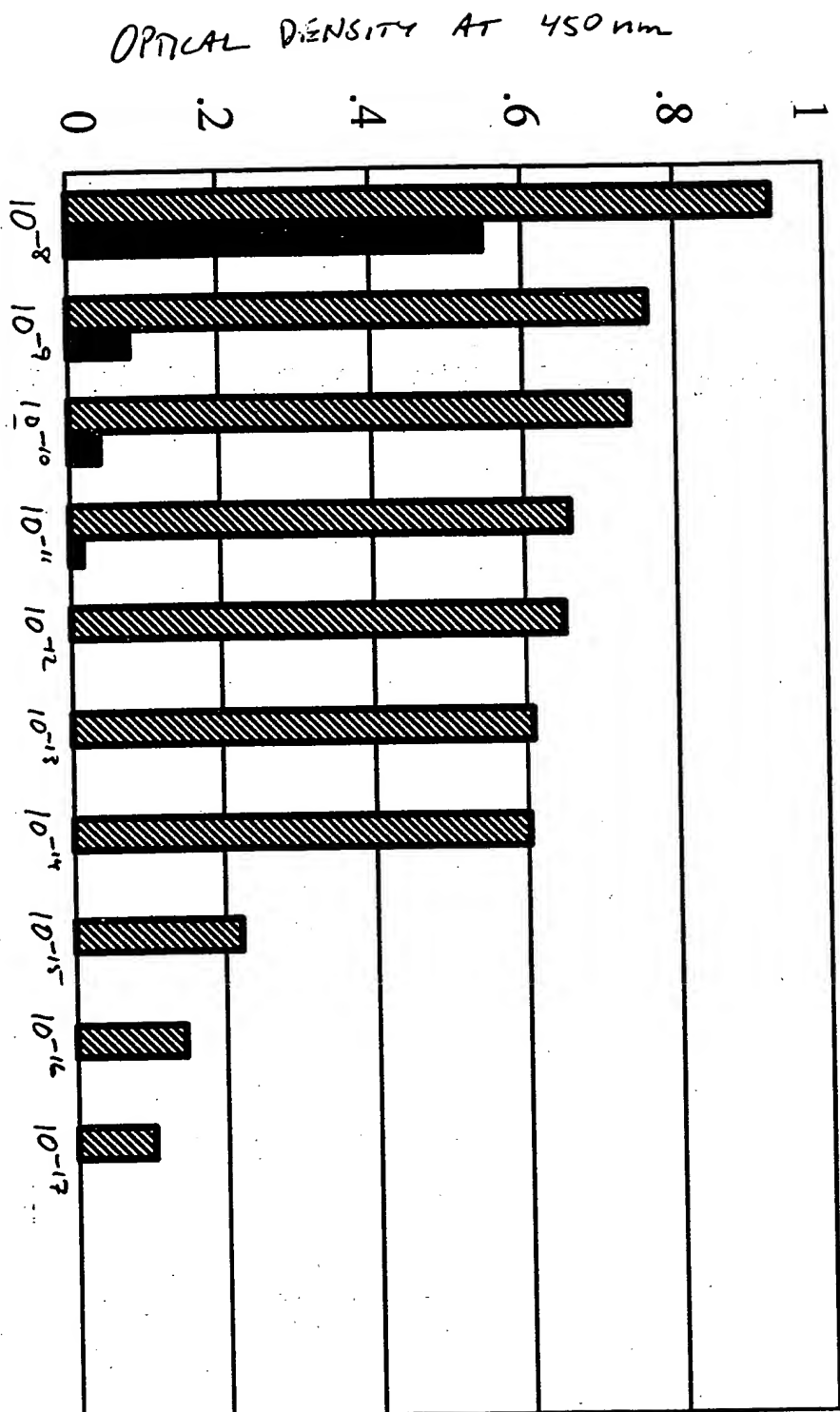




Fig 30B



Colloid Modified ELISA Yields a Million-Fold Increase in Sensitivity



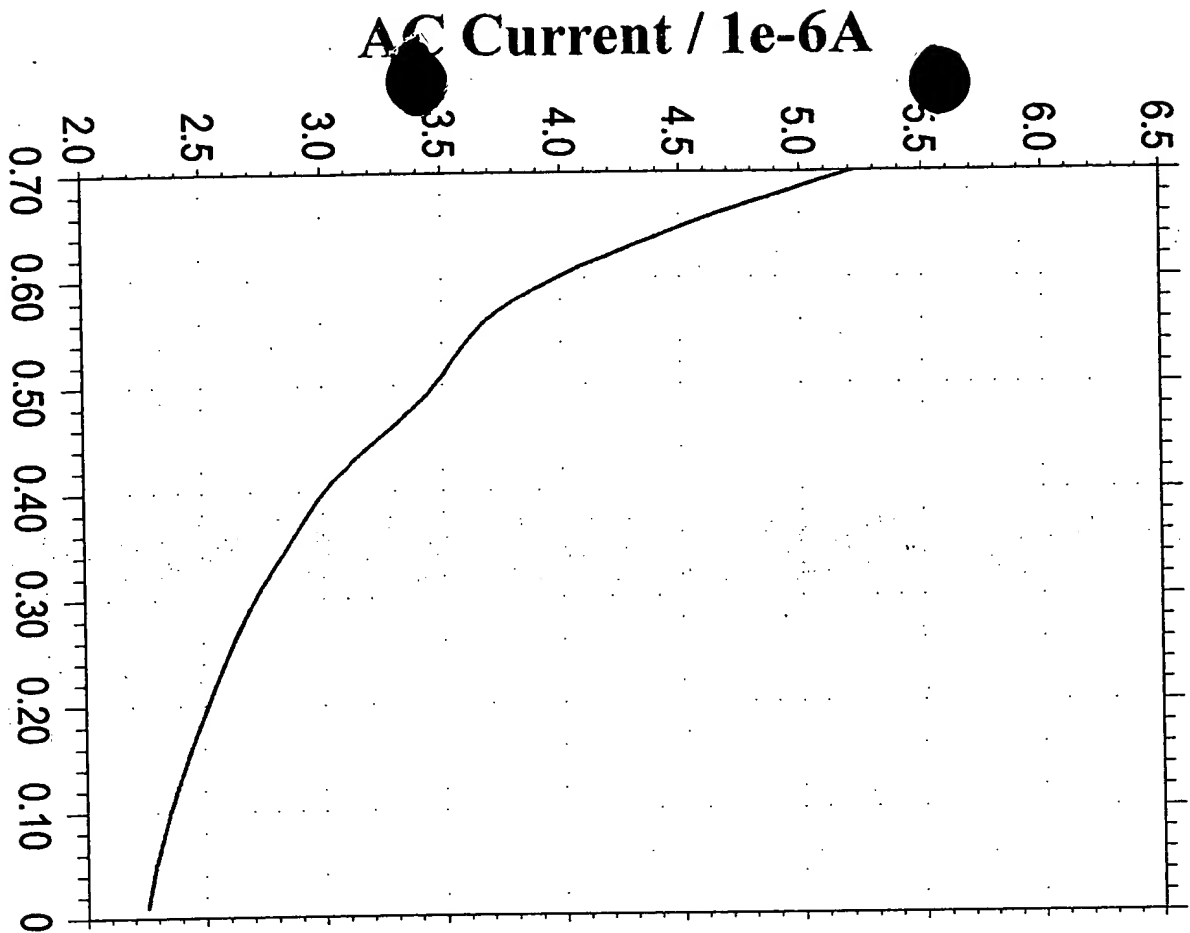
 : MULTIPLE
SIGNALING
ENTITIES

 : CONTROL

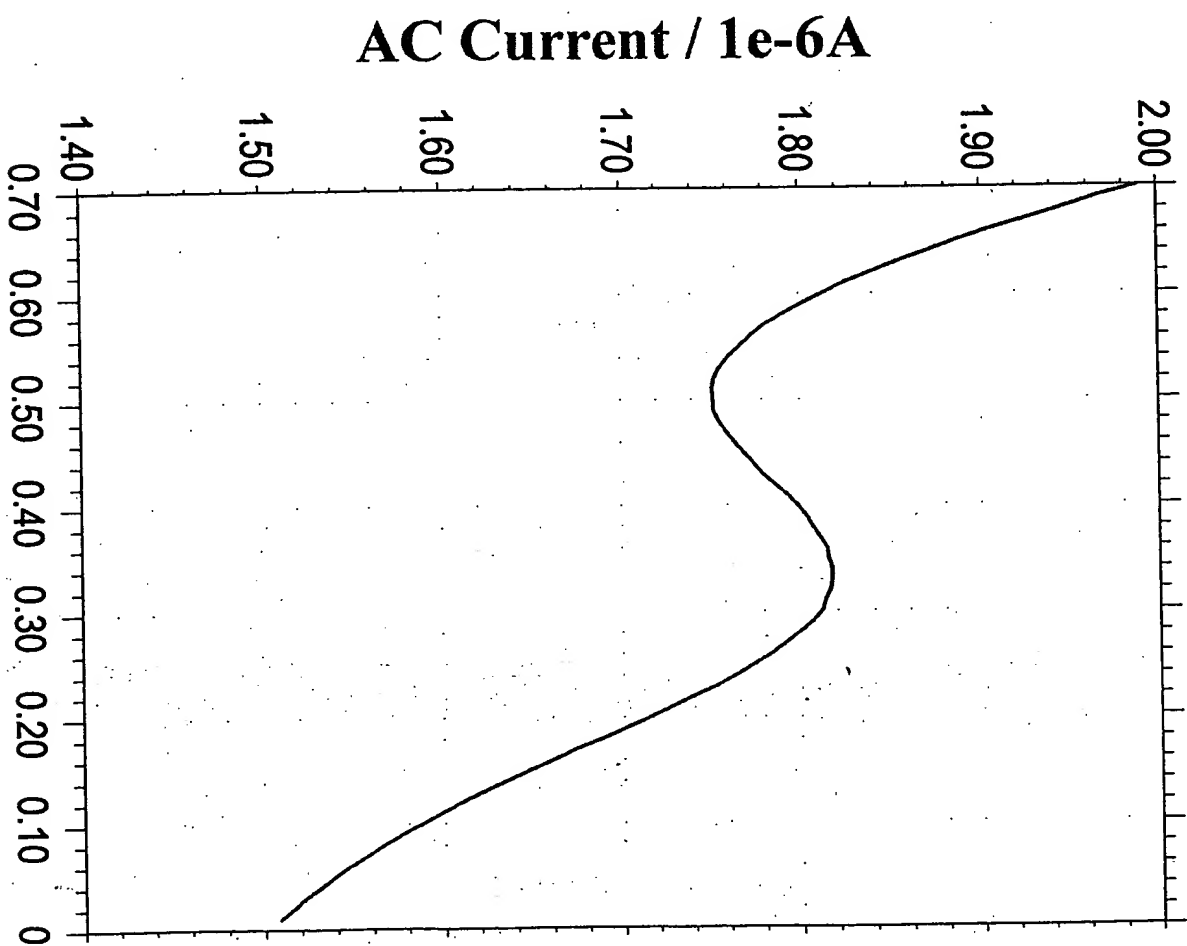
Target protein (grams)

25% WIT-CHIP WITH GS1-COLUMNS

unbound colloids in solution.bin



bound to glutathione beads.bin



Potential / V

09602778.D.E2300

Potential / V

1.1 3.3